第４講　難関国公立大英語長文④

次の英文を読んで，下記の設問に答えよ。

Many people listen to music while they're carrying out a task, whether they're studying for an exam, driving a vehicle or even reading a book. Many of these people argue that background music helps them focus.

Why, though? When you think about it, that doesn't make much sense. Why would having two things to concentrate on make you more focused, not less? Some people even go so [　ア　] as to say that not having music on is more distracting. So what's going on there?

It's not clear why the brain likes music so much in the first place, although it clearly does. Interestingly, there's a specific spectrum of musical properties that the brain prefers. Experiments by Maria Witek and colleagues reveal that there needs to be a medium level of syncopation* in music to elicit a pleasure response and associated body movement in individuals. What this means in plain English is: music needs to be funky, but not too funky, for people to like it enough to make them want to dance.

Your own experience will probably back (1) <u>this</u> up. Simple, monotonous beats, like listening to a metronome, aren't really entertaining. They have low levels of syncopation and certainly don't make you want to dance. [　イ　] contrast, chaotic and unpredictable music, like free jazz, has high levels of syncopation, can be extremely off-putting and rarely, if ever, entices people to dance.

The middle ground hits the sweet spot between predictable and chaotic, for

which the brain has a strong preference. Most modern pop falls somewhere within this range, no doubt.

NOTE

Why would music help us concentrate, though? One argument is to do with attention.

For all its amazing abilities, the brain hasn’t really evolved to take in abstract information or spend prolonged periods thinking about one thing. We seem to have two attention systems: (2) a conscious one that enables us to direct our focus towards things we know we want to concentrate on and an unconscious one that shifts attention towards anything our senses pick up that might be significant. The [あ] one is simpler, more fundamental, and linked to emotional processing rather than higher reasoning. It also operates faster. So when you hear a noise when you’re alone at home, you’re paying attention to it long before you’re able to work out what it might have been. You can’t help it.

The trouble is, while our [い] attention is focused on the task in hand, the unconscious attention system doesn’t shut down; it’s still very much online, scanning for anything important in your peripheral senses. And if what we’re doing is unpleasant or dull - so you’re already having to force your attention to stay fixed on it — the [う] attention system is even more potent. This means that a distraction doesn’t need to be stimulating to divert your attention on to something else.

Have you ever worked in an open-plan office and been working on a very important task, only to be driven slowly mad by a co-worker constantly sniffing, or sipping their coffee, or clipping their nails? Something quite innocuous* suddenly becomes much more infuriating when you’re trying to work on something your brain doesn’t necessarily enjoy.

NOTE

Music is a very useful tool in (3) such situations. It provides non-invasive noise and pleasurable feelings, to effectively neutralise the [え] attention system's ability to distract us. It's much like giving small children a new toy to play with while you're trying to get some work done without them disturbing you.

However, it's not just a matter of providing any old background noise to keep distractions at bay. A lot of companies have tried using pink noise — a less invasive version of white noise — broadcasting it around the workplace to reduce distractions and boost productivity. But views on the effectiveness of this approach are mixed at [ウ].

It seems clear that the type of noise, or music, is important. This may seem obvious: someone listening to classical music while they work wouldn't seem at all unusual, but if they were listening to thrash metal it would be thought very strange indeed.

While the nature and style of the music can cause specific responses in the brain, some studies suggest that it really is down to personal preference. Music you like increases focus, while music you don't impedes it. (4) Given the extreme variation in musical preferences from person to person, exposing your workforce or classroom to a single type of music would obviously end up with mixed results.

Music also has a big impact on mood — truly bleak music could sap your enthusiasm for your task. [A] is music with catchy lyrics. Musical pieces without words might be better working companions, as human speech and vocalisation is something our brains pay particular attention to.

[Does music really help you concentrate? by Dean Burnett, 20 Aug 2016, Copyright Guardian News & Media Ltd 2023]

*syncopation = musical rhythm in which the emphasis is not on beats that are normally emphasized

*innocuous = completely harmless

NOTE

問 1 下線部(1)(3)が表す内容を，日本語で述べよ。

問 2 下線部(2)(4)を日本語に訳せ。

問 3 空所[A]に入る次の語を最も適切に並び替えて英文を完成し，その英文の 2 番目と 5 番目に来る語を番号で書け。文頭に来るべき単語も小文字で示している。

① else ② look ③ for ④ to ⑤ something ⑥ out

問 4 空所[ア]～[ウ]に入る最も適切な英単語(1 語)を書け。

問 5 空所[あ]～[え]に入る最も適切な語を下から選び、番号で答えよ。同じ語を繰り返し用いても良い。

① conscious ② unconscious

第４講 解答

<解答>

問１ (1) 快楽反応や，それに関連する体の動きを引き起こすには，音楽に中程度のシンコペーションが必要であるということ。

(3) 脳が必ずしも楽しめていない仕事に取り組んでいるときに，全く無害なものが突然腹立たしくなる状況のこと。

問２ 全訳の下線部(2)(4)を参照。

問３ ①，⑥

問４ ［ア］far ［イ］In(By) ［ウ］best

問５ ［あ］② ［い］① ［う］② ［え］②

<全訳>

多くの人が，試験勉強中であろうと乗り物の運転中であろうと，あるいは読書中であろうとも，作業中に音楽を聞く。こうした人の多くがバックグラウンドミュージックのおかげで集中できると主張する。

しかし，なぜだろう。それについて考えてみても，あまり意味をなさない。二つのことに集中すると，なぜ集中力が低下するどころか，高まるのだろうか。音楽をかけていないともっと気が散るとすら，言う人もいる。そこでは何が起こっているのか。

そもそも，脳が音楽を好む理由は明らかではないが，そうであることは明らかだ。興味深いことに，脳が好む音楽の特質を持った，特定の領域が存在する。マリア・ウィテックと同僚による実験では，次のことが明らかになっている。人の快楽反応とそれに関わる体の動きを引き起こすために，音楽には中程度のシンコペーションが必要だということだ。これを簡単な英語で表すとこうだ。人が踊りたくなるほど気に入るためには，音楽はファンキーである必要はあるが，過度にファンキーではいけないということだ。

おそらくあなた自身の経験は，これを支持するだろう。メトロノームを聞いているような単純で，単調なリズムはあまり面白くはない。そのようなものでは，シンコペーションの程度が低く，踊りたくはならない。対照的に，フリージャズのような混沌とした予測のつかない音楽は，高度なシンコペーションがあるので，極端に気が散り，

あるとしてもめったに踊りたくはならない。

予測可能な場合と混沌とした場合の中間地点が，ちょうどよく，脳もこれを強く好む。間違いなく，現代のほとんどのポップミュージックがこの領域のどこかにある。

もっとも，音楽によってなぜ私たちは集中できるのだろうか。理由の一つは，注意力に関するものだ。

驚くべき能力があるにも関わらず，脳は，抽象的な情報を理解するために進化してはおらず，また，長期間一つのことについて考えたりするために進化してもいないのだ。私たちには，二つの注意力のシステムがあるように思える。(2)集中したいと思うものに注意を向けることができる意識的なものと，私たちの感覚で重要かもしれないと思うものに注意を向ける無意識のものだ。無意識のものは，より単純でもっと根本的なもので，高度な推論力よりむしろ感情の処理に関連している。それはまたより速く反応する。よって，家に一人でいるときに騒音が聞こえると，それが何であるかわかるずっと前に，それに注意を向けている。それは避けられないことだ。

困ったことに，意識的に注意を向けることが手元の作業に集中している間に，無意識に注意を向ける仕組みが機能しないわけではないのだ。それはずっと機能しており，補助的な感覚で重要なものをチェックしているのだ。そして，もし私たちがやっていることが不快であったり退屈であったりするのなら，また，その状態で強制的に注意をそれに固定したままにしなければならないとしたら，無意識に注意を向ける仕組みはいっそう強くなる。これはすなわち，注意を他のものにそらすために，気を散らすものが刺激的である必要はないということだ。

あなたは今までに，間仕切りのないオフィスでとても重要な仕事に取り組んでいたが，同僚がずっと鼻をすすっていたり，コーヒーをすすっていたり，爪を切ったりする音で，だんだんと気が狂いそうになったことはあるだろうか。脳が必ずしも楽しめていない仕事に取り組もうとすると，全く無害なものが，突然腹立たしいものになる。

そのような状況では音楽がとても役に立つツールになる。音楽は嫌にならない音や楽しい感情をもたらし，気をそらそうとする無意識に注意を向ける仕組みを，効果的に中立にする。それは，幼い子供に邪魔をされずある作業を終えようとする間に，新しいおもちゃを彼らに与えるようなものだ。

しかし，それは単に，気が散るものを寄せ付けないようにするため，昔なじみのどんなバックグラウンドノイズでも良いという問題ではない。たくさんの会社がピンクノイズ，すなわちホワイトノイズより耳障りではないものを使おうとしており，それ

を職場で流すことで，気が散るのを減らしたり，生産性を高めたりしようとしているのだ。しかし，この方法が効果的であるかに関する見解は，賛否両論ある。

ノイズ，すなわち音楽が重要であることは明らかに思える。このことは，明白に思えるかもしれない。なぜなら，仕事中にクラシックを聴く人は全く異常とは思われないだろうが，もしスラッシュメタルを聞いているなら，実に変に思われるだろう。

音楽の性質やスタイルは脳に明確な反応を引き起こすことができるが，研究の中には，それは実際には個人の趣向によると示すものもある。好きな音楽は集中力を高めるが，そうではない音楽は集中の妨げとなる。(4)人によって音楽の好みが極端に違うことを考慮すると，職場や教室で一種類の音楽をかけると，明らかにプラスマイナス入り混じった結果となるだろう。

音楽はまた感情に大きな影響を与える。本当に暗い音楽は，仕事への情熱を弱める可能性がある。他に注意すべき点は，ノリの良い歌詞の音楽だ。歌詞のない音楽が，仕事中により適しているというのは，人間の話や言葉は，脳が特に注意を向けるものだからだ。

第４講　重要語彙リスト　　＊一つ一つ何度も繰り返して，覚えてください

1	go so far as to do	〜しさえする
2	distracting	気が散る
3	spectrum	領域
4	property	特質
5	medium	中間の
6	elicit	引き出す
7	back up	支持する
8	monotonous	単調な
9	chaotic	混沌とした
10	rarely, if ever,	あるとしてもめったに〜ない
11	entice O to do	O をそそのかして〜させる
12	sweet spot	成功できるような状況
13	for all	〜にもかかわらず
14	evolve	進化する
15	take in	理解する
16	abstract	抽象的な
17	prolonged	長期の
18	peripheral	補助的な
19	potent	効力を発する
20	stimulate	刺激する
21	divert	そらす
22	sniff	鼻をすする
23	sip	〜を飲む，すする
24	innocuous	無害な
25	infuriate	激怒させる
26	neutralise	中立化する
27	disturb	邪魔をする
28	keep O at bay	O を寄せ付けない
29	boost	高める
30	be down to 〜	〜のせいだ
31	impede	邪魔をする
32	given 〜	〜を考慮すると
33	expose A to B	A を B にさらす
34	end up with 〜	〜に終わる
35	sap	弱める
36	enthusiasm	熱意

第４講　音読用白文　①　②　③　④　⑤　⑥　⑦　⑧　⑨　⑩

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Why, though? When you think about it, that doesn't make much sense. Why would having two things to concentrate on make you more focused, not less? Some people even go so far as to say that not having music on is more distracting. So what's going on there?

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